

Foodborne botulism – A public health emergency

Partnership in Action

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Panel Discussion

- Canning and Foodborne Botulism
- Timeline of Events
- Q & A

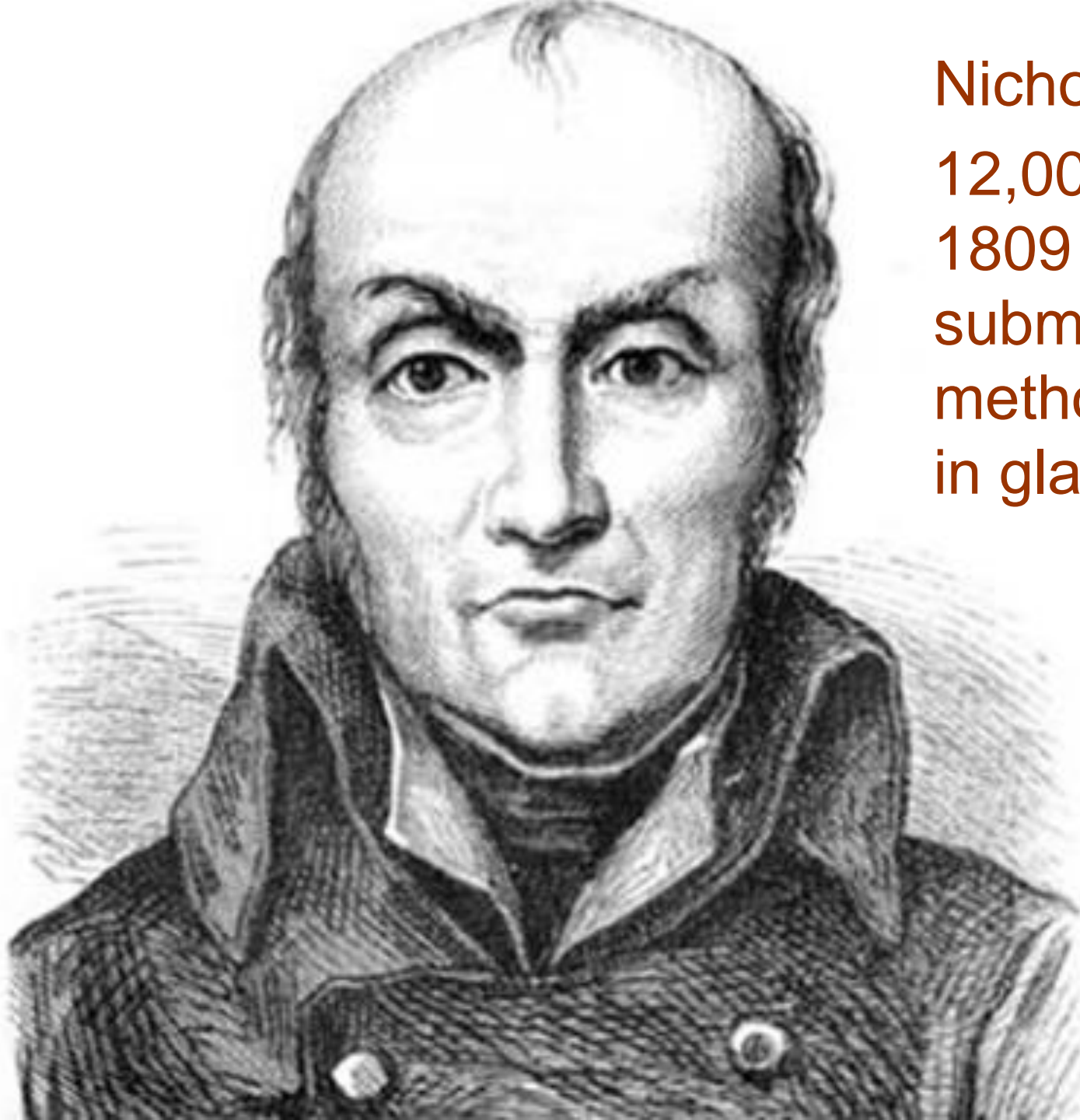
Panel Discussion

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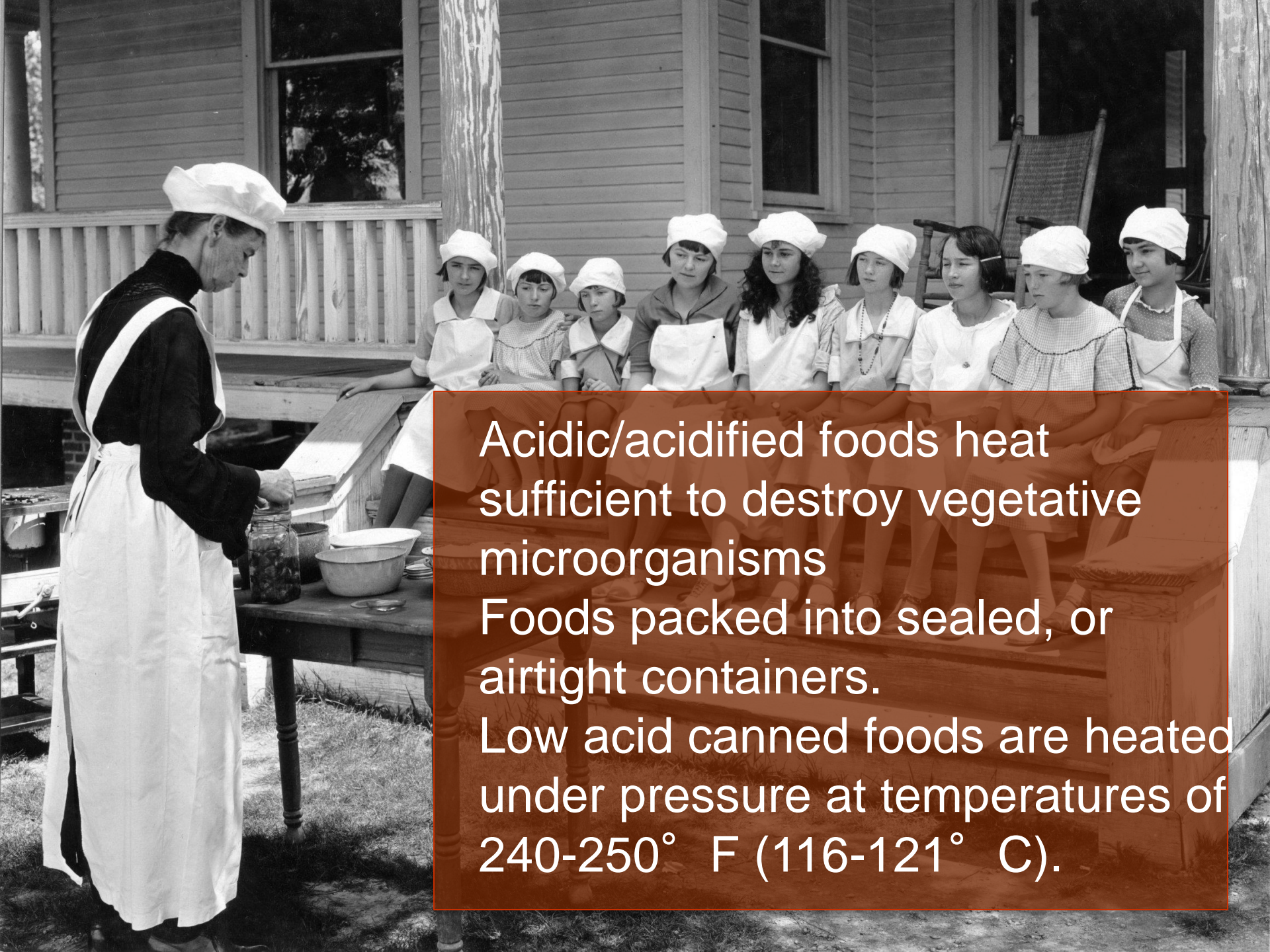
Botulism and home canned foods

Dr. Ben Chapman
NC State University
May 6, 2015





Nicholas Appert
12,000 francs, in
1809 when he
submitted his
method of “food
in glass bottles.”



Acidic/acidified foods heat
sufficient to destroy vegetative
microorganisms

Foods packed into sealed, or
airtight containers.


Low acid canned foods are heated
under pressure at temperatures of
240-250° F (116-121° C).



Majority of home canners have reported not following science-based home preservation methods

Receive much of their home preservation information through friends and family


Only 45% of respondents thought that home canned foods could be spoiled without obvious signs of spoilage

A photograph of a man with a mustache and goatee, smiling, holding a large white plastic bag filled with a yellowish liquid. He is wearing a blue t-shirt with the word 'ELAM' visible. The background is a plain, light-colored wall.

2012 CDC surveillance
160 cases
25 cases foodborne
12 were linked to 2
pruno outbreaks

Pickled beets,
that weren't
actually pickled
linked to 3
Oregon illnesses
in 2012



The image shows several glass jars filled with small, round, yellowish potatoes. The potatoes are submerged in a liquid, likely brine or oil. Some jars have white labels with black text. One label in the foreground reads "From The Muehli's Kitchen", "Potatoes", and "Canned Sept. 1, 2009". Another label on a jar in the background also reads "From The Muehli's Kitchen" and "Potatoes". The jars are arranged on a wooden surface.

Clostridium botulinum
Lancaster, Ohio
One death and 24 illnesses
Linked to a church potluck
Canned potatoes in potato
salad

From The Muehli's
Kitchen

Potatoes
Canned Sept. 1, 2009

From The
Kitc

Potat
Canned Sept

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January 2015						
SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Day
1

4

7

10

13

16

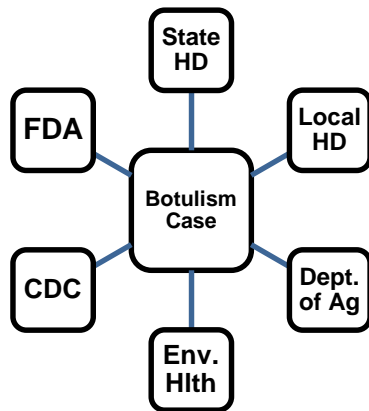
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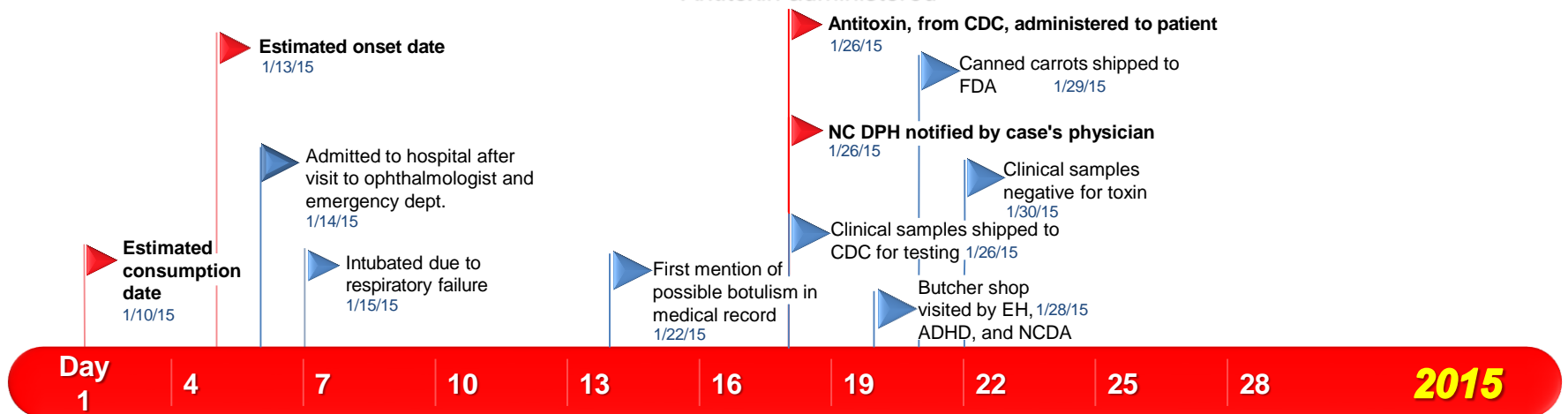
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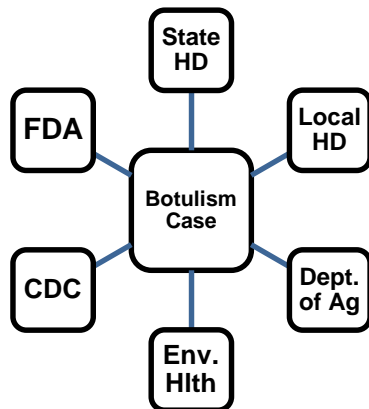
28

2015



January 2015						
SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10 Consumption
11	12 Onset	13	14 Admitted	15 Intubated	16	17
18	19	20	21	22	23	24
25	26 DPH Stool/blood obtained Antitoxin administered	27	28 Butcher shop visit	29 Canned carrots shipped to FDA (-) for toxin	30 Clinical samples	31



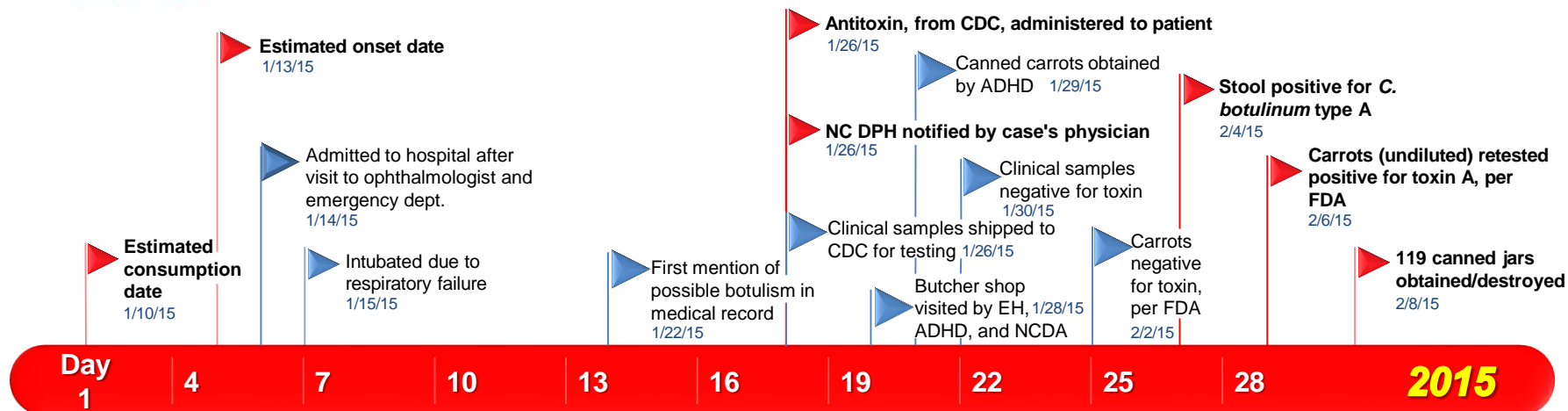


January 2015

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10 <small>consumption</small>
11	12	13 <small>onset</small>	14 <small>admitted</small>	15 <small>intubated</small>	16	17
18	19	20	21	22	23	24
25	26 <small>DPH notified/ Stool/blood obtained Antitoxin administered</small>	27	28 <small>Butcher shop visit</small>	29 <small>Canned carrot obtained</small>	30 <small>Clinical samples (-) for toxin</small>	31

February 2015

SUN	MON	TUE	WED	THU	FRI	SAT
1	2 <small>Carrots (-) for toxin</small>	3	4 <small>Stool (+) <i>C. Botulinum</i> type A</small>	5	6 <small>Carrots retested (+) toxin A</small>	7
8 <small>119 canned jars destroyed (imminent hazard)</small>	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28



Status of Case A Today

- Discharged from hospital in April after being hospitalized for 11.5 weeks
- No longer on a ventilator
- Living with family member
- Able to speak;

Take Home Points

Public Health Event

- Canning is a cultural tradition
- Processes are passed on for generations, but perhaps not the why behind the processes
- This was a tragic mistake that can happen to anyone not using proper canning procedures

Response

- Rely on the strength of your partners
- Communication is vital
- Mechanics of response involve a lot of moving pieces

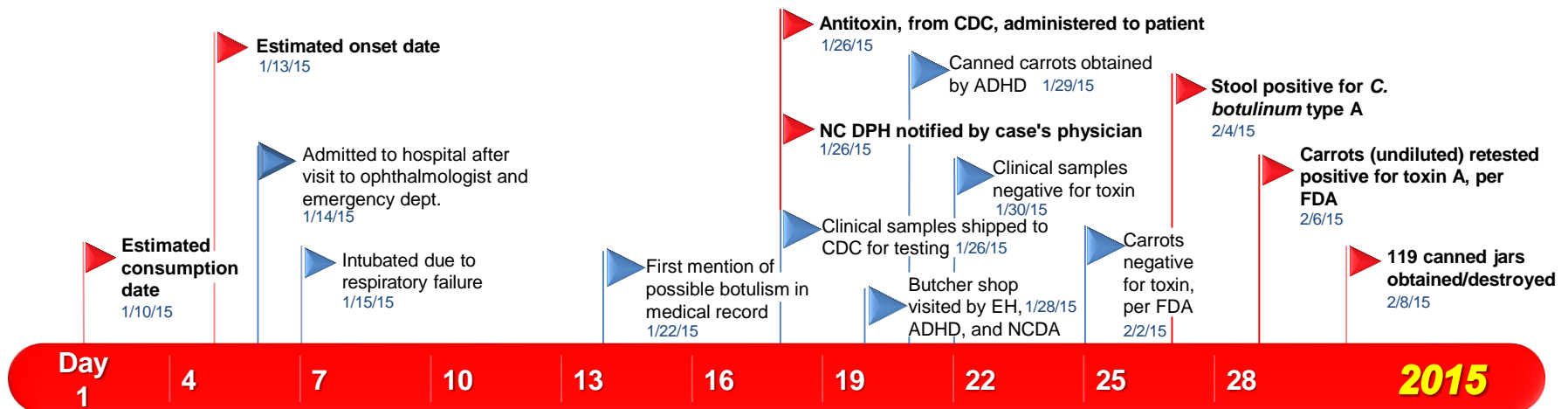
ACKNOWLEDGMENTS

We gratefully acknowledge the family members of our botulism case who provided valuable information and assistance during a very difficult time in their personal lives.

- Appalachian District Health Department
 - Beth Lovette (Health Director)
 - Candy Graham (District CD Nurse)
 - Kipper Price (Ashe County CD Nurse)
 - Michael Roberson (District Food Specialist)
- NC Department of Agriculture
 - Jim Melvin
 - Joan Sims
 - Julie Schlegel
- NC Division of Public Health
 - Megan Davies
 - Larry Michael
 - Chris Hoke
 - Jennifer Stewart
 - Zack Moore
 - Carl Williams
 - Vanessa Greene
 - Kristin Sullivan
- FDA
 - Brett Weed
 - Southeastern Regional Lab Microbiology Department (SRL)
- CDC
 - Carolina Luquez
 - Rupa Narra
 - Agam Rao

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January 2015

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10 consumption
11	12	13 onset	14 admitted	15 intubated	16	17
18	19	20	21	22	23	24
25	26 DPH notified Stool/blood obtained Antitoxin administered	27	28 Butcher shop visit	29 Canned carrot obtained	30 Clinical samples (-) for toxin	31

March 2015

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

February 2015

SUN	MON	TUE	WED	THU	FRI	SAT
1	2 Carrots (-) for toxin	3	4 Stool (+) C. Botulinum type A	5	6 Carrots retested (+) toxin A	7
8 119 canned jars destroyed (imminent hazard)	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

April 2015

SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3 Discharged	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		



APPALACHIAN DISTRICT HEALTH DEPARTMENT

DISTRICT OFFICE: 126 Poplar Grove Connector, Boone, NC 28607

Telephone 828-264-4995 Fax 828-264-4997

www.appdhs.org



Health for All: Promote. Prevent. Empower.

February 6, 2015

Thank you very much for your assistance and complete cooperation with the Appalachian District Health Department's investigation to determine and confirm that botulism from a jar of home-canned carrots had been the cause of illness for [REDACTED]. Your availability for interview and your subsequent actions at our request are greatly appreciated, especially in light of [REDACTED] serious health situation.

Because of the laboratory confirmation, our investigatory state/local team determined that all of the home-canned goods have the potential risk for botulism contamination. Therefore, according to North Carolina General Statute 130A-20, as local health director, I have declared all of the home-canned goods at [REDACTED] residence an imminent public health hazard, unsafe for human consumption. This required immediate abatement. As such, and with your assistance, we have embargoed and safely destroyed all of the home-canned goods that you delivered to Kipper Price, RN. I have copied the General Statutes for your information:

§ 130A-2. Definitions. The following definitions shall apply throughout this Chapter unless otherwise specified:

(3) "imminent hazard" means a situation that is likely to cause an immediate threat to human life, an immediate threat of serious physical injury, an immediate threat of serious adverse health effects, or a serious risk of irreparable damage to the environment if no immediate action is taken.

"§ 130A-20. Abatement of an imminent hazard.

(a) If the Secretary or a local health director determines that an imminent hazard exists, the Secretary or a local health director may order the owner, lessee, operator, or other person in control of the property to abate the imminent hazard or may, after notice to or reasonable attempt to notify the owner, lessee, operator, or other person in control of the property enter upon any property and take any action necessary to abate the imminent hazard. If the Secretary or a local health director abates the imminent hazard, the Department or the local health department shall have a lien on the property of the owner, lessee, operator, or other person in control of the property where the imminent hazard existed for the cost of the abatement of the imminent hazard. The lien may be enforced in accordance with procedures provided in Chapter 44A of the General Statutes. The lien may be defeated by a showing that an imminent hazard did not exist at the time the Secretary or the local health director took the action. The owner, lessee, operator, or any other person against whose property the lien has been filed may defeat the lien by showing that that person was not culpable in the creation of the imminent hazard.

(b) The Secretary of Environment and Natural Resources and a local health director shall have the same rights enumerated in subsection (a) of this section to enforce the provisions of Articles 9 and 10 of this Chapter. (1893, c. 214, s. 22; Rev., ss. 3446, 4450; 1911, c. 62, ss. 12, 13; 1913, c. 181, s. 3; C.S., ss. 7071, 7072; 1957, c. 1357, s. 1; 1983, c. 891, s. 2; 1997-443, s. 11A.63; 2002-179, s. 6; 2006-255, s. 13.6; 2011-145, s. 13.3(uu).)

Again, please accept my thanks for your assistance. Best wishes for a complete and speedy recovery to [REDACTED]

Sincerely,

Beth Lovette

Beth Lovette, MPH, RN, Public Health Director

cc. Nicole Lee, MPH, Epidemiologist, Communicable Disease Branch, N.C. Department of Health and Human Services